

July 24, 1998

William deBoisblanc
Director of Permit Services
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Re: Proposed Title V Permits for PG&E Company's Pittsburg, Contra Costa, Hunters Point and Potrero Power Plants (Plant Numbers A0012, A0018, A0024, and A0026)

Dear Mr. deBoisblanc:

The U.S. Environmental Protection Agency (EPA) appreciates the opportunity to review the Bay Area Air Quality Management District's (District) proposed Title V permits for PG&E Company's Pittsburg, Contra Costa, Hunters Point and Potrero electric generation power plants (Plant Numbers A0012, A0018, A0024 and A0026), which were received on June 11, 1998. In accordance with 40 CFR §70.8 (c), and District Regulation 2, Rule 6-411.1, EPA has reviewed the proposed permits during our 45-day review period.

The proposed permits contain many examples of good monitoring. However, as my staff has discussed with Mr. Steve Hill, Air Quality Engineering Manager, on July 16, July 22 and July 23, 1998, there are several issues that must be addressed before the permits may be issued. As agreed to in our conversations and in the information provided to EPA by the District on July 23, 1998 via facsimile, we were able to resolve the issues noted in the comments below. We have enclosed our comments for your review.

Please note that if the permits are later found to require corrective steps (including, but not limited to, reopening for cause) the expiration of both EPA's review period and the public petition period does not compromise EPA's authority to take such measures. The terms contained in these permits are specific to the facilities and do not create conditions for the use, operation, or reliance of any other party.

EPA appreciates the District's efforts to work with us to address our concerns during the 45-day review period. We also appreciate your attention to our comments and look forward to future discussions as needed. If you have any questions concerning our comments, please do not hesitate to contact John Walser of my staff at (415) 744-1257.

Sincerely,

Matt Haber
Chief, Permit Office
Air Division

enclosure

cc: Steve Hill, BAAQMD
Ray Menebroker, CARB
Randal S. Livingston, PG&E

ENCLOSURE

U.S. EPA Comments on the Proposed Title V Operating Permits for PG&E's Contra Costa, Hunters Point, Pittsburg and Potrero Power Plants, (Plant Numbers A0012, A0018, A0024, A0026)

1. *Opacity Monitoring for Turbines at Hunters Point and Potrero* -- Section VII. Applicable Emission Limits & Compliance Monitoring Requirements (Tables VII-A for Hunters Point and VII-B for Potrero).

The proposed permits do not include monitoring for opacity for the eight oil-fired 26 MW peaking-unit turbines (six Turbo Power and Marine Systems Model FT4C-1D/LF turbines at Hunters Point, and two Turbo Power and Marine Systems Model FT4-CIDLF turbines at Potrero). The permit must be revised to include monitoring for opacity to assure compliance with the general opacity standard.

The District has agreed (via the July 23, 1998 facsimile to EPA) to add the following language to the Hunters Point and the Potrero Power Plant Title V operating permits for the turbines:

1. For each emission point at an oil-fired combustion unit, the permittee shall follow either a) or b), as appropriate, upon receipt of public complaint, upon obvious emissions, but no less frequently than once each day. The daily inspection shall be conducted while the equipment is operating and during daylight hours:
 - a) If 3 or fewer exceedances have been recorded at any emission point within the last 6 months, conduct an inspection for visible emissions from that emission point. If any visible emissions, excluding condensed water vapor, are detected during an inspection and the emissions are observed continuously or intermittently for 3 minutes, the permittee shall either:
 - (i) Take corrective actions that eliminate the visible emissions and report the visible emission as a potential exceedance. If all visible emissions are not eliminated through corrective actions as soon as possible but not later than within 24 hours, the procedure in paragraph (ii) below shall be followed; or
 - (ii) Have a CARB-certified smoke-reader determine compliance with the opacity standard, using EPA Method 9 or the procedures outlined in the CARB manual "Visible Emissions Evaluation" for 6 minutes within 3 days and record the results of the reading. The certified smoke-reader shall continue to conduct the Method 9 or CARB Visible Emission Evaluation on a daily basis until the daily reading shows compliance with the applicable limit.

b) If more than 3 exceedances have been recorded at any emission point within the last 6 months, a CARB-certified smoke-reader shall conduct either an EPA Method 9 or the procedures outlined in the CARB manual "Visible Emissions Evaluation" at that emission point for 6 minutes.

2. For each unit covered by paragraph 1, the permittee shall record and maintain the following records:

a) each day monitoring under 1(a) or 1(b) is required:

- i) date and time of inspection, and name of inspector
- ii) stack or emission point identification

b) each day for each emission point where corrective action is required under 1(a)(i):

- i) nature of visible emissions
- ii) description of corrective actions taken to abate visible emissions
- iii) date and time visible emission was abated

c) each day for each emission point where EPA Method 9 or CARB visible emission evaluation is required under (1)(b) or (1)(a)(ii):

- i) visible emission observation record by a certified smoke reader
- ii) name of person performing the inspection, measurement, or monitoring

2. *NOx Monitoring for the Turbines* -- The Hunters Point and Potrero turbines are subject to a SIP limit of 65 ppmvd, and are controlled by water injection. However, no monitoring is included for this limit in the proposed permits. The District has stated that source test data indicates the turbines comply with the 65 ppmvd NOx requirement when the water to fuel ratio is 0.55 or greater. The District has agreed to add a permit condition to require a minimum ratio (or equivalent water flow rate) during operation of the turbines and to record the rates manually. EPA recommends that the rates be recorded at least once per shift or daily at a minimum. In our July 24, 1998 telephone conversation, the District has agreed that this record keeping frequency is reasonable and will be added to the permit.

3. *Periodic Monitoring for Fuel Sulfur Content* -- The boilers and the Potrero turbines are required to conduct the 40 CFR 75, Appendix D (Optional SO2 Emissions Data Protocol) monitoring in lieu of continuous SO2 monitoring. Appendix D monitoring will provide information on fuel sulfur content on a daily basis. The Hunters Point turbines are not required to comply with the Appendix D protocol. According to Table VII-A, these units appear to be missing a requirement for fuel analysis recordkeeping. The District has agreed (July 16, 1998 conference call) to add a condition to the permits to require recordkeeping of fuel suppliers' sulfur content certifications to assure compliance with the fuel sulfur content limit.

4. *Particulate Testing for Turbines -- Compliance with 0.15 gr/dscf SIP Limit.* Potrero has six 26 MW turbines, Hunter's Point two, all peaking units fired on diesel oil. In the engineering demonstration, Bay Area compared these units' SIP limit of 0.15 lb/MMBTU to an AP-42 emission factor of 0.061 lb/MMBTU. Because AP-42 emission factors are not designed for

estimating emissions for individual sources, but to provide are an average emission estimate based on a limited number of source test data, and because the particular factor used has a low rating ("E"), this comparison does not show that the turbines are unlikely to violate their emission limit. Therefore, this was not adequate to demonstrate that no monitoring is necessary.

The District and EPA discussed the possibility of using source test data, either from PG&E or similar sources, to make a demonstration regarding the sources' potential for violation. EPA suggested that Bay Area could either provide source data, or the permit could be revised to require initial testing and periodic testing based on the initial test results. We made the following proposal:

If turbines operate at 10% capacity or less: Initial stack test and once per permit term thereafter.

If turbines operate at greater than 10% capacity: Stack test emission points with flows greater than 20,000 acfm on a yearly basis. If the last two tests have been less than 50% of the allowable, reduce frequency to biennially. Emission units with exhaust flow between 5,000 and 20,000 acfm should be tested on a biennial basis. If the last two tests are less than 50% of the limit, reduce testing frequency to once every four years. Emissions points with flows between 1,000 and 5,000 acfm should be tested every five years.

The District proposed instead to add a permit condition limiting operation of each distillate oil fired turbine to less than 877 hours (10% capacity) in any consecutive 12 month period, and to use opacity monitoring (see comment 1). While we agree that this will reduce the units' potential to emit and provide an indication of particulate matter emissions, Bay Area and EPA will continue researching information regarding similar units. Additional information may show that these units have a potential to violate the emission limit which in turn would require unit-specific information to show compliance with the grain loading limits.

EPA also raised the concern that the units were not limited to operating on distillate fuel. We propose, in addition to the District's addition of operational limitations and opacity monitoring, that the permit include the following requirement. The District has agreed to consider adding this requirement to the permit:

For each turbine, if the turbine operates on fuel oil other than distillate (No. 2) for more than 100 hours of cumulative use annually, or 300 hours total operation during the permit term, the source will perform a stack test.

5. Sand Blasting Facility -- In the Applicable Emission Limits & Compliance Monitoring Requirements section of the permits for the Pittsburg, Contra Costa and Potrero plants, EPA is concerned that no monitoring is listed to assure compliance with the particulate emissions limits of 0.15 gr/dscf and the Ringelmann 1 limit in the SIP. However, the District has informed EPA that the cartridge type filter abatement devices have an integral failure warning system which will trigger a strobe light and horn in case of a differential pressure failure in the units. The District has proposed that in essence this warning system functions as an opacity monitor for the

sandblasting operations at the plants. While we agree that this monitoring would indicate a gross failure, it may not be adequate to indicate particulate breakthrough at a level which could cause a violation of the emission limit. If this is the case, additional monitoring, such as visual observation, in combination with the warning system, should be considered.

For the Contra Costa facility, if a similar warning system is not operational for the baghouse at that location, the District has agreed to add monitoring requirements to the permit in the form of visual emission inspections on an event basis or regular maintenance procedures for the baghouse. EPA recommends that the District add **both** visual emission inspections (EPA Reference Method 22 or similar) on an event basis and regular maintenance procedures for the baghouse. To the extent possible, EPA recommends that the District propose requirements that are similar to the requirements in the U.S. Pipe and Foundry permit.

6. *Boilers* -- Section VII. Applicable Emission Limits & Compliance Monitoring Requirements lists no monitoring for the lead emission limits of 6.75 kg/day and 1.0 ug/m³ averaged over 24 hours. The permit evaluation demonstrations that were provided did not specify that the emission factors presented were based on turbines firing on No. 6 fuel oil. The District has agreed to update the permit evaluation to reflect this information.

7. *Revised Boiler Capacities* -- EPA acknowledges receipt of the District's letter dated June 30, 1998 whereby PG&E requests that the District revise boiler capacities at all four power plants to reflect actual operating conditions versus the original boiler capacities that were more descriptive in nature. EPA concurs with this request as outlined below, under the assumption that PG&E has not made any physical modifications to the boilers or burners that have resulted in an increased heat input capacity.

Application #	Plant #	Source #	Original Capacity	Revised Capacity
15109	A0012	1,2,3,4	1660 MMBTU/hr	1725 MMBTU/hr
15109	A0012	5, 6	2985 MMBTU/hr	3300 MMBTU/hr
25774	A0018	9, 10	3315 MMBTU/hr	3400 MMBTU/hr
25773	A0024	7	1600 MMBTU/hr	1720 MMBTU/hr
25772	A0026	1	1970 MMBTU/hr	2150 MMBTU/hr

8. *Correction* -- Section VII. Applicable Emission Limits & Compliance Monitoring Requirements, Table VII-A on page 27 of the Pittsburgh Power Plant permit lists the monitoring type for particulate emissions (TSP) as continuous opacity monitoring (COM), however the monitoring frequency is listed as "P" or periodic under the monitoring frequency column. Please change the information in the table to require continuous or "C" monitoring frequency.